

AMENDMENTS TO THE CLAIMS

1-2. (canceled)

3. (currently amended) An electrochromic device, comprising:

(a) a first substantially transparent substrate having ~~a front~~ an outer surface and ~~a rear~~ an inner surface, wherein an electrically conductive material is applied to at least a portion of the ~~rear~~ inner surface;

(b) a second substrate having ~~a front~~ an inner surface and ~~a rear~~ an outer surface, wherein an electrically conductive material is applied to at least a portion of the inner ~~front~~ surface; and

(c) an electrochromic medium contained within a chamber positioned between the first and second substrates which comprises:

(1) at least one solvent;

(2) at least one electrochromic material;

(3) a cross-linked matrix; and

(4) wherein the cross-linked matrix results from cross-linking preformed substantially non cross-linked polymer chains having a molecular weight of at least approximately 1,000 daltons.

4. (previously presented) The electrochromic device according to claim 3, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

5. (previously presented) The electrochromic device according to claim 3, wherein the cross-linked matrix results from cross-linking polymer chains having a molecular weight of at least approximately 2,000 daltons.

6. (previously presented) The electrochromic device according to claim 5, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

7. (previously presented) The electrochromic device according to claim 3, wherein the cross-linked matrix results from cross-linking polymer chains having a molecular weight of at least approximately 3,000 daltons.

8. (previously presented) The electrochromic device according to claim 7, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

9. (previously presented) The electrochromic device according to claim 3, wherein the cross-linked matrix results from cross-linking polymer chains having a molecular weight of at least approximately 5,000 daltons.

10. (previously presented) The electrochromic device according to claim 9, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

11. (currently amended) An electrochromic device, comprising:

- (a) a first substantially transparent substrate having ~~a front~~ an outer surface and ~~a rear~~ an inner surface, wherein an electrically conductive material is applied to at least a portion of the ~~rear~~ inner surface;
- (b) a second substrate having ~~a front~~ an inner surface and ~~a rear~~ an outer surface, wherein an electrically conductive material is applied to at least a portion of the inner ~~front~~ surface; and
- (c) an electrochromic medium contained within a chamber positioned between the first and second substrates which comprises:
 - (1) at least one solvent;
 - (2) at least one electrochromic material;
 - (3) a free-standing gel; and
 - (4) wherein the free-standing gel results from cross-linking preformed substantially non cross-linked polymer chains having a molecular weight of at least approximately 1,000 daltons.

12. (previously presented) The electrochromic device according to claim 11, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

13. (previously presented) The electrochromic device according to claim 11, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 2,000 daltons.

14. (previously presented) The electrochromic device according to claim 13, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

15. (previously presented) The electrochromic device according to claim 11, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 3,000 daltons.

16. (previously presented) The electrochromic device according to claim 15, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

17. (previously presented) The electrochromic device according to claim 11, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 5,000 daltons.

18. (previously presented) The electrochromic device according to claim 17, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

19. (currently amended) An electrochromic device, comprising:

(a) a first substantially transparent substrate having ~~a front~~ an outer surface and ~~a rear~~ an inner surface, wherein an electrically conductive material is applied to at least a portion of the ~~rear~~ inner surface;

(b) a second substrate having ~~a front~~ an inner surface and ~~a rear~~ an outer surface, wherein an electrically conductive material is applied to at least a portion of the inner ~~front~~ surface; and

(c) an electrochromic medium contained within a chamber positioned between the first and second substrates which comprises:

(1) at least one solvent;

(2) at least one electrochromic material;

(3) a free-standing gel; and

(4) wherein the free-standing gel results from cross-linking polymer chains, and wherein forming the polymer chains and cross-linking are not substantially one and the same reaction.

20. (previously presented) The electrochromic device according to claim 19, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

21. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 1,000 daltons.

22. (previously presented) The electrochromic device according to claim 21, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

23. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 2,000 daltons.

24. (previously presented) The electrochromic device according to claim 23, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

25. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 3,000 daltons.

26. (previously presented) The electrochromic device according to claim 25, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

27. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel results from cross-linking polymer chains having a molecular weight of at least approximately 5,000 daltons.

28. (previously presented) The electrochromic device according to claim 27, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

29. (currently amended) An electrochromic device, comprising:

- (a) a first substantially transparent substrate having ~~a front~~ an outer surface and ~~a rear~~ an inner surface, wherein an electrically conductive material is applied to at least a portion of the ~~rear~~ inner surface;
- (b) a second substrate having ~~a front~~ an inner surface and ~~a rear~~ an outer surface, wherein an electrically conductive material is applied to at least a portion of the inner ~~front~~ surface; and
- (c) an electrochromic medium contained within a chamber positioned between the first and second substrates which comprises:
 - (1) at least one solvent;
 - (2) at least one electrochromic material;
 - (3) a substantially non-weeping gel; and
 - (4) wherein the substantially non-weeping gel results from cross-linking preformed substantially non cross-linked polymer chains having a molecular weight of at least approximately 1,000 daltons.

30. (previously presented) The electrochromic device according to claim 29, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

31. (previously presented) The electrochromic device according to claim 29, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 2,000 daltons.

32. (previously presented) The electrochromic device according to claim 31, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

33. (previously presented) The electrochromic device according to claim 29, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 3,000 daltons.

34. (previously presented) The electrochromic device according to claim 33, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

35. (previously presented) The electrochromic device according to claim 29, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 5,000 daltons.

36. (previously presented) The electrochromic device according to claim 35, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

37. (currently amended) An electrochromic device, comprising:

(a) a first substantially transparent substrate having ~~a front~~ an outer surface and ~~a rear~~ an inner surface, wherein an electrically conductive material is applied to at least a portion of the ~~rear~~ inner surface;

(b) a second substrate having ~~a front~~ an inner surface and ~~a rear~~ an outer surface, wherein an electrically conductive material is applied to at least a portion of the inner ~~front~~ surface; and

(c) an electrochromic medium contained within a chamber positioned between the first and second substrates which comprises:

(1) at least one solvent;

(2) at least one electrochromic material;

(3) a substantially non-weeping gel; and

(4) wherein the substantially non-weeping gel results from cross-linking polymer chains, and wherein forming the polymer chains and cross-linking are not substantially one and the same reaction.

38. (previously presented) The electrochromic device according to claim 37, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

39. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 1,000 daltons.

40. (previously presented) The electrochromic device according to claim 39, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

41. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 2,000 daltons.

42. (previously presented) The electrochromic device according to claim 41, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

43. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 3,000 daltons.

44. (previously presented) The electrochromic device according to claim 43, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

45. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 5,000 daltons.

46. (previously presented) The electrochromic device according to claim 45, wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

47. (previously presented) An electrochromic device, comprising:

- at least one substrate; and
- a substantially non-weeping gel, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 1,000 daltons, and wherein the polymer chains are formed prior to cross-linking by polymerization of at least one monomer.

48. (previously presented) The electrochromic device according to claim 47, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 2,000 daltons.

49. (previously presented) The electrochromic device according to claim 47, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 3,000 daltons.

50. (previously presented) The electrochromic device according to claim 47, wherein the substantially non-weeping gel results from cross-linking polymer chains having a molecular weight of at least approximately 5,000 daltons.

51. (currently amended) The electrochromic device according to claim 47, wherein the ~~same~~ electrochromic device is a solid state device.

52. (previously presented) The electrochromic device according to claim 3, wherein the cross-linked matrix comprises less than approximately 50 percent by weight of the electrochromic medium.

53. (previously presented) The electrochromic device according to claim 3, wherein the cross-linked matrix comprises less than 33 percent by weight of the electrochromic medium.

54. (previously presented) The electrochromic device according to claim 3, wherein the cross-linked matrix comprises less than 19 percent by weight of the electrochromic medium.

55. (previously presented) The electrochromic device according to claim 11, wherein the free-standing gel comprises less than approximately 50 percent by weight of the electrochromic medium.

56. (previously presented) The electrochromic device according to claim 11, wherein the free-standing gel comprises less than 33 percent by weight of the electrochromic medium.

57. (previously presented) The electrochromic device according to claim 11, wherein the free-standing gel comprises less than 19 percent by weight of the electrochromic medium.

58. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel comprises less than approximately 50 percent by weight of the electrochromic medium.

59. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel comprises less than 33 percent by weight of the electrochromic medium.

60. (previously presented) The electrochromic device according to claim 19, wherein the free-standing gel comprises less than 19 percent by weight of the electrochromic medium.

61. (previously presented) The electrochromic device according to claim 29, wherein the substantially non-weeping gel comprises less than approximately 50 percent by weight of the electrochromic medium.

62. (previously presented) The electrochromic device according to claim 29, wherein the substantially non-weeping gel comprises less than 33 percent by weight of the electrochromic medium.

63. (previously presented) The electrochromic device according to claim 29, wherein the substantially non-weeping gel comprises less than 19 percent by weight of the electrochromic medium.

64. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel comprises less than approximately 50 percent by weight of the electrochromic medium.

65. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel comprises less than 33 percent by weight of the electrochromic medium.

66. (previously presented) The electrochromic device according to claim 37, wherein the substantially non-weeping gel comprises less than 19 percent by weight of the electrochromic medium.

67. (previously presented) The electrochromic device according to claim 47, wherein the substantially non-weeping gel comprises less than approximately 50 percent by weight of the electrochromic medium.

68. (previously presented) The electrochromic device according to claim 47, wherein the substantially non-weeping gel comprises less than 33 percent by weight of the electrochromic medium.

69. (previously presented) The electrochromic device according to claim 47, wherein the substantially non-weeping gel comprises less than 19 percent by weight of the electrochromic medium.